

POLYMORPHISM IN ALGAE.

In Proc. Linn. Soc. N. So. Wales (1910), G. I. Playfair reports a piece of work on Desmids, which needs to be done, and might be undertaken profitably even by isolated students, for other groups of algæ also. It requires careful observation over long periods of time. He discovers great polymorphism among the Desmids, as among other algæ: and believes that only about 10 per cent of the species are valid, the other 90 per cent being polymorphic forms of them. The degree of polymorphism and the environmental factors influencing it both need to be studied for numerous algæ.

DISINTEGRATION OF MICRO-ORGANISMS.

J. E. Barnard (Jour. R. M. S. Oct. 1911) describes a mechanical method for disintegrating organic cells and obtaining the protoplasmic contents by rupturing the cell walls. This is done by grinding in a metal vessel, by means of rotating balls pressing against the surface of the vessel. Construction is such as to minimize friction with its resulting heat and disintegration of the metal. No abrasive material is used. The object of the apparatus is to get bacterial proteins or other cell constituents, especially the toxins in the case of those bacteria that retain their toxins in large degree within the cells.

REGENERATION OF BLOOD PLATELETS IN DOGS.

Dake (Jour. Exp. Med. Sept. 1911) gives the following results of a series of experiments: (1) Repeated withdrawal, defibrination, and reinjection of blood in dogs reduces the platelets to a very low percentage of their normal number; (2) at such times there is a tendency to bleed profusely; (3) platelets regenerate very rapidly,—about 1-5 of the total in 24 hours. From these results he believes that the platelets are normally produced rapidly, utilized or disintegrated rapidly, and have a brief life-history.

WHITE CORPUSCLES AND DUCTLESS GLANDS IN TOAD.

H. Mietens (Jena. Zeitschr., 1910) finds that the white blood corpuscles arise, in the embryo of the common toad, (1) from unspecialized blood cells which may also give rise to the colored

cells; (2) from mesenchyme cells; and (3) from endocardial cells that become freed. In the adult, both white and red cells may arise in the mesenchyme of the liver. According to this writer some of the ductless glands, as thymus and spleen, arise from the entrance and multiplication of migratory cells within the sheaths of certain blood vessels.

THE ADULT OF THE PEARL-PRODUCING PARASITE OF THE OYSTER.

T. Southwell (Ceylon Marine Biological Reports V:1911) believes that he has demonstrated the probability that the adult of the worm, which in the larval stage stimulates the formation of the pearl in the oyster, is *Tetrarhynchus unionifactor* and may occur in the Elasmobranchs that feed upon oysters. The adult worm was found in specimens of fish which had been kept in an enclosure and fed on infected oysters,—whereas similar fish not so fed were destitute of them.

EFFECT OF TESTIS EXTRACT ON FEMALES.

Since the discovery of the role of hormones in the blood and of the influence of the products of sex glands on the development of the secondary sex characters in males, efforts have been made to determine to what extent male characters can be induced in females thru the influence of male hormones.

Geoffrey Smith (Q. T. M. S. 1911) fails to find any evidence that the internal secretions of the testis of the cock, when injected into the female, tends to produce the secondary sexual characters of the male.

SEXUALITY IN SPORES OF MOSSES.

Marchal (Bull. Soc. Roy. Bot. Belg. 1911) says that a dioecious moss (e. g. *Bryum caespiticium*), is really heterosporous, and that half the spores produce protonemata from which male, and half from which female, gametophytes arise exclusively. He claims that this dioecism begins in the tetrad,—two spores from each tetrad producing male, and two female, gametophytes. This suggests the Mendelian segregation of sex characters.